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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Thomas E. Saulpaugh

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Robert C Kowert  
conley Rose & Tayon PC  
PO Box 398  
Austin, TX 78767-0398

EXAMINER

KANG, INSUN

ART UNIT

PAPER NUMBER

2193

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

09/663,563

Applicant(s)

SAULPAUGH ET AL.

Examiner

Insun Kang

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-90 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is in response to the pre-appeal brief request filed on 12/18/2006.  
In view of the request, prosecution is hereby reopened. New grounds of rejection are introduced below.
2. Claims 1-90 are pending in the application.

### ***Double Patenting***

3. The applicant has neither filed a terminal disclaimer nor presented arguments traversing the rejection, therefore, the rejection has maintained. See the previous action mailed on 6/19/2006.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4 and 6-90 are rejected under 35 U.S.C. 102(a) as being anticipated by Johnson ("XML JavaBeans Integration, Part 3," 7/1999).

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Per claim 1:

Johnson discloses:

- a process executing within a virtual machine providing a first computer programming language object to a compilation process of the virtual machine, wherein the first object is an instance of a class in the computer programming language (i.e. XMLBeans can transform a JavaBean in memory into an XML document," page 1 first paragraph)
- the compilation process of the virtual machine converting the first object into a data representation language representation of the first object (i.e. "read and write JavaBeans objects as XML documents," page 1 paragraph 7); wherein the data representation language representation of the first object is configured for use in generating a copy of the first object (i.e. can transform an XML document...into a running JavaBean," page 1 first paragraph) as claimed.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Johnson teaches:  
the compilation process converting the one or more objects into data representation language representations of the one or more objects (i.e. page 5 paragraph 3-5).

Per claim 3:

The rejection of claim 1 is incorporated, and further, Johnson teaches:

- processing the first object into an intermediary table representation of the first

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object; and processing the intermediary table representation of the first object into the data representation language representation of the first object (i.e. page 5 paragraph 3-5).

Per claim 4:

The rejection of claim 3 is incorporated, and further, Johnson teaches:

for each of the one or more instance variables in the first object, generating an entry in the intermediary table representation of the first object, wherein the entry for each of the one or more instance variables includes an identifier of the instance variable and a value of the instance variable (i.e. page 13 code lines 666-677).

Per claim 6:

The rejection of claim 4 is incorporated, and further, Johnson teaches:

-for each of one or more entries in the intermediary table representation of the first object, generating a corresponding element in the data representation language representation of the first object, wherein the element in the data representation language representation of the first object includes an identifier of the instance variable and a value of the instance variable (i.e. page 15 paragraph 6).

Per claim 7:

The rejection of claim 6 is incorporated, and further, Johnson teaches:

the one or more elements in the data representation language representation of the first object are configured for use in initializing one or more corresponding instance variables in the copy of the first object (i.e. page 7 last paragraph).

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Per claim 8:

The rejection of claim 1 is incorporated, and further, Johnson teaches:

providing an application programming interface (API) for the compilation process, wherein the API comprises interfaces to one or more methods of the compilation process configured for use by processes executing within the virtual machine to convert computer programming language objects into data representation language representations of the objects (i.e. page 7 last paragraph).

Per claim 9:

The rejection of claim 1 is incorporated, and further, Johnson teaches:

-said data representation language is extensible Markup Language (XML) (i.e. page 7 last paragraph).  
as claimed.

Per claim 10:

The rejection of claim 1 is incorporated, and further, Johnson teaches:

said computer programming language is the Java programming language (i.e. page 7 last paragraph).

Per claim 11:

The rejection of claim 1 is incorporated, and further, Johnson teaches:

-the virtual machine is a Java Virtual Machine (JVM) (i.e. page 7 last paragraph).  
as claimed.

Per claim 12:

Johnson teaches:

-a virtual machine receiving a data representation language representation of a first computer programming language object from a first process  
a decompilation process of the virtual machine generating the first object from the data representation language representation of the first object, wherein the first object is an instance of a class in the computer programming language; and the decompilation process of the virtual machine providing the first object to a second process executing within the virtual machine (i.e. XMLBeans can transform a JavaBean in memory into an XML document," page 1 first paragraph; "read and write JavaBeans objects as XML documents," page 1 paragraph 7;  
can transform an XML document...into a running JavaBean," page 1 first paragraph).

Per claim 13:

The rejection of claim 12 is incorporated, and further, Johnson teaches:

the first object references one or more computer programming language objects, wherein the representation of the first object includes representations of the one or more referenced objects (i.e. page 5 paragraph 3-5).

Per claim 14:

The rejection of claim 13 is incorporated, and further, Johnson teaches:

- the decompilation process generating the one or more referenced objects from the representations of the one or more referenced objects included in the representation of the first object (i.e. page 5 paragraph 3-5).

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Per claim 15:

The rejection of claim 12 is incorporated, and further, Johnson teaches:

processing the data representation language representation of the first object into an intermediary table representation of the first object; and generating the first object from the intermediary table representation of the first object (i.e. page 13 code lines 666-677).

Per claim 16:

The rejection of claim 15 is incorporated, and further, Johnson teaches:

- one or more elements each representing an instance variable of the first object, wherein each element in the data representation language representation comprises an identifier for the instance variable represented by the element and a value for the instance variable represented by the element. (i.e. page 13 code lines 666-677).

Per claim 17:

The rejection of claim 16 is incorporated, and further, Johnson teaches:

representation language representation of the representation of the first object comprises generating an entry in the intermediary table representation of the first object for each of the one or more elements in the data representation language representation of the first object (i.e. page 13 code lines 666-677).

Per claim 18:

The rejection of claim 17 is incorporated, and further, Johnson teaches:



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instantiating the first object as an instance of the class; and for each of the one or more entries in the intermediary table representation of the first object, initializing a corresponding instance variable in the first object in accordance with the entry (i.e. page 13 code lines 666-677).

Per claim 19:

The rejection of claim 17 is incorporated, and further, Johnson teaches:

instantiating the first object as an instance of the class; and for each of the one or more entries in the intermediary table representation of the first object, invoking a method corresponding to the identifier of the instance variable from the entry to initialize a corresponding instance variable in the first object to the value of the instance variable from the entry (i.e. page 13 code lines 666-677).

Per claim 20:

The rejection of claim 12 is incorporated, and further, Johnson teaches:

the data representation language representation of the first object comprises an identifier of the class of the first object, and wherein the decompilation process generating the first object from the data representation language representation of the first object comprises instantiating the first object as an instance of the class associated with the class identifier(i.e. page 13 code lines 666-677).

Per claim 21:

The rejection of claim 16 is incorporated, and further, Johnson teaches:

providing an application programming interface (API) for the decompilation process, wherein the API comprises interfaces to one or more methods of the decompilation

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process configured for use by processes executing within the virtual machine to generate computer programming language objects from data representation language representations of the objects. (i.e. page 7 last paragraph).

Per claim 22:

The rejection of claim 12 is incorporated, and further, Johnson teaches:

Said data representation language is extensible Markup Language (XML) (i.e. page 7 last paragraph).

Per claim 23:

The rejection of claim 12 is incorporated, and further, Johnson teaches:

said computer programming language is the Java programming language. (i.e. page 7 last paragraph).

Per claim 24:

The rejection of claim 12 is incorporated, and further, Johnson teaches:

the virtual machine is a Java Virtual Machine (JVM). (i.e. page 7 last paragraph).

Per claim 25:

Johnson teaches:

a first virtual machine receiving from a first process a computer programming language object, wherein the object is an instance of a class in the computer programming language the first virtual machine generating a representation of the object in a data representation language subsequent to said receiving generating a message in the data representation language, wherein the message includes the data representation language representation of the object; sending the message to a second

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process; and the second process generating a copy of the computer programming language object from the data representation language representation of the object included in the message(i.e. XMLBeans can transform a JavaBean in memory into an XML document," page 1 first paragraph; "read and write JavaBeans objects as XML documents," page 1 paragraph 7; " can transform an XML document...into a running JavaBean," page 1 first paragraph).

Per claim 26:

The rejection of claim 25 is incorporated, and further, Johnson teaches:

the object references one or more computer programming language objects, and wherein said generating a representation of the object in a data representation language comprises generating data representation language representations of the one or more objects(i.e. page 5 paragraph 3-5).

Per claim 27:

The rejection of claim 25 is incorporated, and further, Johnson teaches:

-for each of the one or more instance variables in the object, generating an element in the data representation language representation of the first object, wherein the element for each of the one or more instance variables includes an identifier of the instance variable and a value of the instance variable(i.e. page 5 paragraph 3-5).

Per claim 28:

The rejection of claim 25 is incorporated, and further, Johnson teaches:

the second process receiving the message including the data representation

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language representation of the object; the second process providing the data representation language representation of the object to a second virtual machine; the second virtual machine generating the copy of the object from the data representation language representation of the object; and the second virtual machine providing the copy of the object to the second process (i.e. page 5 paragraph 3-5).

Per claim 29:

The rejection of claim 28 is incorporated, and further, Johnson teaches:

the first object references one or more computer programming language objects, wherein the data representation language representation of the first object includes data representation language representations of the one or more referenced objects, and wherein said generating the copy of the object from the data representation language representation of the object comprises generating copies of the one or more referenced objects from the data representation language representations of the one or more referenced objects(i.e. page 5 paragraph 3-5).

Per claim 30:

The rejection of claim 28 is incorporated, and further, Johnson teaches:

instantiating the copy of the object as an instance of the class; and for each of the one or more elements in the data representation language representation of the object, initializing a corresponding instance variable in the copy of the object in accordance with the element (i.e. page 13 code lines 666-677).

Per claims 31-33, they are another method versions of claims 9-11, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 9-11 above.

Per claim 34:

Johnson teaches:

a first process receiving a message in a data representation language from a second process, wherein the message includes information representing a computer programming language object; the first process providing the information representing the object to a virtual machine; the virtual machine generating the object from the information representing the object, wherein the object is an instance of a class in the computer programming language; and the virtual machine providing the generated object to the first process (i.e. XMLBeans can transform a JavaBean in memory into an XML document," page 1 first paragraph; "read and write JavaBeans objects as XML documents," page 1 paragraph 7; " can transform an XML document...into a running JavaBean," page 1 first paragraph).

Per claim 35:

The rejection of claim 34 is incorporated, and further, Johnson teaches: information representing one or more instance variables of the object, wherein the information representing each of the one or more instance variables comprises an identifier for the instance variable and a value for the instance variable (i.e. XMLBeans can transform a JavaBean in memory into an XML document," page 1 first paragraph; "read and write

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JavaBeans objects as XML documents," page 1 paragraph 7; " can transform an XML document...into a running JavaBean," page 1 first paragraph).

Per claim 36:

The rejection of claim 35 is incorporated, and further, Johnson teaches: instantiating the object as an instance of the class; and for each of the one or more instance variables, initializing a corresponding instance variable in the object in accordance with the information representing the instance variable (i.e. page 5 paragraph 3-5).

Per claim 37-39: they are another method versions of claims 9-11, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 9-11 above.

Per claims 40-49, they are the device versions of claims 1-4 and 6-11, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-4 and 6-11 above.

Per claims 50-61, they are another device versions of claims 1-4 and 6-11, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-4 and 6-11 above.

Per claims 62-70, they are the medium versions of claims 1-4 and 6-11, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-4 and 6-11 above.

Per claims 71-77, they are another medium versions of claims 1-4 and 6-11, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-4 and 6-11 above.

Per claims 78-83, they are the medium versions of claims 12-24, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 12-24 above.

Per claims 84-90, they are the medium versions of claims 25-33, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 25-33 above.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson ("XML JavaBeans Integration, Part 3," 7/1999) as applied to claims 1-4 and 6-90 above in view of Gillam ("Java Liaison" column, 3/1999).

Per claim 5:

The rejection of claim 4 is incorporated, and further,

Johnson does not explicitly teach that the first object comprises a plurality of instance variables with the same identifier, and wherein the entry for each of the plurality of

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instance variables with the same identifier further includes an enumeration value that uniquely identifies the instance variable in the plurality of instance variables with the same identifier. However, Gillam teaches using enumeration was well known in the pertinent art, at the time applicant's invention was made, to specify individually legal values for a particular type (i.e. see Enumerated types example in page 2). It would have been obvious for one having ordinary skill in the art to modify Johnson's disclosed system to incorporate the teachings of Gillam. The modification would be obvious because one having ordinary skill in the art would be motivated to enumerate all of the possible values for a variable of the type for run-time efficiency (i.e. see Enumerated types example in page 2).

### ***Response to Arguments***

9. Applicant's arguments filed 12/18/2006 have been fully considered but are moot in view of the new ground(s) of rejection. Therefore this action is made non-final.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724.

The examiner can normally be reached on M-R 6:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MENG AI AN can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published



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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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WEI ZHANG  
SUPERVISORY PATENT EXAMINER